

## SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Can Nguyen Examiner #: 74787 Date: 8/16/02  
 Art Unit: 1754 Phone Number 30 5-323 Serial Number: \_\_\_\_\_  
 Mail Box and Bldg/Room Location: 9386 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

\*\*\*\*\*

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc. if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: \_\_\_\_\_

Inventors (please provide full names): \_\_\_\_\_

Earliest Priority Filing Date: \_\_\_\_\_

*\*For Sequence Searches Only\* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*

*Litigation*  
*6,019,906*

*No Litigation Reported*

## STAFF USE ONLY

	Type of Search	Vendors and cost where applicable
Searcher: <u>Hellersen</u>	NA Sequence (#) _____	STN _____
Searcher Phone #: <u>8-4483</u>	AA Sequence (#) _____	Dialog _____
Searcher Location: <u>CP3/43062</u>	Structure (#) _____	Questel/Orbit <u>414.04</u>
Date Searcher Picked Up: <u>8/16/02</u>	Bibliographic _____	Dr.Link _____
Date Completed: <u>8/16/02</u>	Litigation <input checked="" type="checkbox"/>	Lexis/Nexis <u>40.00</u>
Searcher Prep & Review Time: <u>2</u>	Fulltext _____	Sequence Systems _____
Clerical Prep Time: _____	Patent Family _____	WWW/Internet _____
Online Time: <u>6</u>	Other _____	Other (specify) _____

**Mellerson, Kendra**

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**From:** Nguyen, Cam  
**Sent:** Tuesday, August 06, 2002 2:20 PM  
**To:** STIC-EIC1700  
**Subject:** Request a litigation search!

Hi,

Please conduct a litigation search on U.S Pat.# 6,019,906.

Thanks,

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Cam Nguyen  
USPTO Patent Examiner  
Tel: 703-305-3923  
[Cam.Nguyen@uspto.gov](mailto:Cam.Nguyen@uspto.gov)

PATNO IS 6019906

DATE: AUGUST 6, 2002  
LIBRARY: PATENT  
FILE: ALL

Your search request is:  
PATNO IS 6019906

Number of PATENTS found with your search request through:  
LEVEL 1... 1

Your search request has found 1 PATENT through Level 1.  
To DISPLAY this PATENT press either the KWIC, FULL, CITE or SEGMENTS key.  
To MODIFY your search request, press the M key (for MODIFY) and then the ENTER key.

For further explanation, press the H key (for HELP) and then the ENTER key.

LEVEL 1 - 1 PATENT

1. 6019906 , February 1, 2000 , Hard masking method for forming patterned oxygen containing plasma etchable layer , Jang, Syun-Ming, Hsin-chu, TWX; Huang, Ming-Hsin, Hsin-chu, TWX, 00086772, Taiwan Semiconductor Manufacturing Company, Hsin-Chu, TWX

CORE TERMS: layer, microelectronics, patterned, dielectric, plasma, oxygen, fabrication, etchable, mask, blanket ...

UNITED STATES PATENT AND TRADEMARK OFFICE GRANTED PATENT

6019906

<=1> GET 1st DRAWING SHEET OF 2

February 1, 2000

Hard masking method for forming patterned oxygen containing  
plasma etchable layer

REISSUE: February 1, 2002 - Reissue Application filed Ex. Gp.: 1754; Re. S.N.  
10/062,314 May 14, 2002

APPL-NO: 00086772

FILED-DATE: May 29, 1998

GRANTED-DATE: February 1, 2000

CORE TERMS: layer, microelectronics, patterned, dielectric, plasma, oxygen,  
fabrication, etchable, mask, blanket ...

ENGLISH-ABST:

A method for forming a patterned microelectronics layer within a microelectronics fabrication. There is first provided a substrate employed within a microelectronics fabrication. There is then formed over the substrate an oxygen containing plasma etchable microelectronics layer. There is then formed upon the oxygen containing plasma etchable microelectronics layer a hard mask layer. There is then formed upon the hard mask layer a patterned photoresist layer. There is then etched through use of a first anisotropic plasma etch method the hard mask layer to form a patterned hard mask layer while employing the patterned photoresist layer as a first etch mask layer. The first anisotropic plasma etch method employs an etchant gas composition appropriate for etching a hard mask material from which is formed the hard mask layer. There is then etched through use of a second plasma etch method the patterned photoresist layer from the patterned hard mask layer while employing the patterned hard mask layer as an etch stop layer while simultaneously etching the

6019906 OR 6,019,906

Your search request has found no CASES.

To edit the above request, use the arrow keys. Be sure to move the cursor to the end of the request before you enter it.

To enter a new search request, type it and press the ENTER key.

What you enter will be Search Level 1.

For further explanation, press the H key (for HELP) and then the ENTER key.

**Current session 06/08/2002**

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QUESTEL.ORBITE (TM) 1998

06/08/02 21\*30\*50

Last connection: 06/08/02 16\*36\*50

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- Latest EP, WO & US Applications in One Alert: INFO APPALERT  
- New Trademark file names, format & fields - INFO COMPU-MARK  
- EPAPAT contains all unique EPTEXT data. EPTEXT file removed  
- New Patent Citation Commands: easy & precise - INFO PATCITE  
- USAPPS Reloaded: Pricing, see INFO USAPPS  
..FILE / ..INFO / ..GUIDE

**Query/Command : FILE PLUSPAT**

QUESTEL - Time in minutes : 0,71

The cost estimation below is based on Questel's  
standard price list

	Estimated cost :	0.61 USD
Cost estimated for the last database search :		0.61 USD
Estimated total session cost	:	0.61 USD

Selected file: PLUSPAT

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Comprehensive Worldwide Patents database

New Patent Citation Commands &amp; FAM Citation Report - see INFO PATCITE

Last update of file: 2002/07/31 (YYYY/MM/DD) 2002-30/UP (basic update)

Search statement 1

**Query/Command : US6019906/PN****\*\* SS 1: Results 1**

Search statement 2

**Query/Command : PRT FULL NONSTOP LEGALALL**

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1 / 1 PLUSPAT - ©QUESTEL-ORBIT

**PN** - **US6019906** A 20000201 [US6019906]  
**TI** - (A) Hard masking method for forming patterned oxygen containing plasma etchable layer  
**PA** - (A) TAIWAN SEMICONDUCTOR MFG (TW)  
**IN** - (A) HUANG MING-HSIN (TW); JANG SYUN-MING (TW)  
**AP** - US8677298 19980529 [1998US-0086772]  
**PR** - US8677298 19980529 [1998US-0086772]  
**IC** - (A) B44C-001/22 C23F-001/00  
**EC** - H01L-021/311B2  
H01L-021/311D  
H01L-021/768B2  
**PCL** - ORIGINAL (O) : 216002000; CROSS-REFERENCE (X) : 216067000 216074000  
216075000 216076000 216079000  
**DT** - Basic  
**CT** - US4994402; US5013686; US5162262; US5219788; US5246883; US5256248;  
US5269879; US5460693; US5472913; US5565384; US5622894; US5654240;  
US5661344; US5700737; US5721172; US5840624; US5858623  
**STG** - (A) United States patent  
**AB** - A method for forming a patterned microelectronics layer within a microelectronics fabrication. There is first provided a substrate employed within a microelectronics fabrication. There is then formed over the substrate an oxygen containing plasma etchable microelectronics layer. There is then formed upon the oxygen containing plasma etchable microelectronics layer a hard mask layer. There is then formed upon the hard mask layer a patterned photoresist layer. There is then etched through use of a first anisotropic plasma etch method the hard mask layer to form a patterned hard mask layer while employing the patterned photoresist layer as a first etch mask layer. The first anisotropic plasma etch method employs an etchant gas composition appropriate for etching a hard mask material from which is formed the hard mask layer. There is then etched through use of a second plasma etch method the patterned photoresist layer from the patterned hard mask layer while employing the patterned hard mask layer as an etch stop layer while simultaneously etching the oxygen containing plasma etchable microelectronics layer while employing at least the patterned hard mask layer as a second etch mask layer to form a patterned oxygen containing plasma etchable microelectronics layer. The second plasma etch method employs an oxygen containing etchant gas composition. The method is particularly useful for forming patterned oxygen containing plasma etchable microelectronics dielectric layers within microelectronics fabrications.



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*1 / 1 LGST - ©LEGSTAT*

**PN** - US 6019906 [US6019906]  
**AP** - US 86772/98 19980529 [1998US-0086772]  
**DT** - US-P  
**ACT** - 19980529 US/AE-A  
APPLICATION DATA (PATENT)  
US 86772/98 19980529 [1998US-0086772]  
  
20000201 US/A  
PATENT  
  
20020514 US/RF  
REISSUE APPLICATION FILED  
20020201  
**UP** - 2002-22

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*1 / 1 CRXX - ©CLAIMS/RRX*

**PN** - 6,019,906 A 20000201 [US6019906]  
**PA** - Taiwan Semiconductor Manufacturing Co TW  
**ACT** - 20020201 REISSUE REQUESTED  
ISSUE DATE OF O.G.: 20020514  
REISSUE REQUEST NUMBER: 10/062314  
EXAMINATION GROUP RESPONSIBLE FOR REISSUEPROCESS: 1754

Reissue Patent Number:

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*1 / 1 PAST - ©Thomson Derwent*

**AN** - 200220-001733  
**PN** - 6019906 A [US6019906]  
**OG** - 2002-05-14  
**ACT** - REISSUE APPLICATION FILED

**Query/Command : FILE INPADOC**

PLUSPAT - Time in minutes : 1,88  
The cost estimation below is based on Questel's  
standard price list

Estimated cost :	4.13 USD
Records displayed and billed : 1	
Estimated cost :	1.10 USD
Cost estimated for the last database search :	5.23 USD
Estimated total session cost :	5.84 USD

LGST - Time in minutes : 0,06  
The cost estimation below is based on Questel's

## standard price list

	Estimated cost :	0.06 USD
Records displayed and billed :	1	
	Estimated cost :	0.57 USD
Legal-Status informations :	1	
	Estimated cost :	4.92 USD
Cost estimated for the last database search :	5.55 USD	
Estimated total session cost :	11.39 USD	

CRXX - Time in minutes : 0,06

The cost estimation below is based on Questel's standard price list

	Estimated cost :	0.09 USD
Records displayed and billed :	1	
	Estimated cost :	5.00 USD
Legal-Status informations :	1	
	Estimated cost :	4.92 USD
Cost estimated for the last database search :	10.01 USD	
Estimated total session cost :	21.40 USD	

PAST - Time in minutes : 0,05

The cost estimation below is based on Questel's standard price list

	Estimated cost :	0.09 USD
Records displayed and billed :	1	
	Estimated cost :	5.61 USD
Legal-Status informations :	1	
	Estimated cost :	4.92 USD
Cost estimated for the last database search :	10.62 USD	
Estimated total session cost :	32.02 USD	

LITA - Time in minutes : 0,01

The cost estimation below is based on Questel's standard price list

	Estimated cost :	0.01 USD
Cost estimated for the last database search :	0.01 USD	
Estimated total session cost :	32.03 USD	

Selected file: INPADO

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Covers 1968/1973 thru weekly updates (2002-31)  
For information on content, (..)INFO INPD.

Search statement 1

**Query/Command : FAM US6019906/PN**

1 Patent Groups

**\*\* SS 1: Results 1**

Search statement 2

**Query/Command : FAMSTATE NONSTOP**

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*1 / 1 INPADOC - ©INPADOC*

**PN** - US 6019906 A 20000201 [US6019906]  
**TI** - HARD MASKING METHOD FOR FORMING PATTERNED OXYGEN  
CONTAINING PLASMA ETCHABLE LAYER  
**IN** - JANG SYUN-MING [TW]; HUANG MING-HSIN [TW]  
**PA** - TAIWAN SEMICONDUCTOR MFG [TW]  
**AP** - US 86772/98-A 19980529 [1998US-0086772]  
**PR** - US 86772/98-A 19980529 [1998US-0086772]  
**IC** - C23F-001/00; B44C-001/22

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*1 / 1 LEGALI - ©LEGSTAT*

**PN** - US 6019906 [US6019906]  
**AP** - US 86772/98 19980529 [1998US-0086772]  
**DT** - US-P  
**ACTE** - 19980529 US/AE-A  
APPLICATION DATA (PATENT)  
US 86772/98 19980529 [1998US-0086772]  
  
20000201 US/A  
PATENT  
  
20020514 US/RF  
REISSUE APPLICATION FILED  
20020201  
**UP** - 2002-22